

Find Your First Tech Job

A Guide for finding your first tech job

By: Matthew MacRae-Bovell



Previously last term....

This presentation is 70% a duplicate of this.





What is this Presentation?

Audience: “You’re applying to internships (maybe not your first), while also thinking about what you want to do after you graduate”

- All the parts of the job hunting process
- How to **stand out** and how to “play the game”
- Some stuff you might have already heard, but that is important
- Advice gathered from a bunch of my experiences job hunting
- Considerations approaching graduation and the current job market

I'm Matthew

I've got roughly **4+ years** of work
experience + contract work,
volunteer development and more.



Exp
Labs.



Fall
2018

May
2019

May
2020

Fall
2020

Winter
2021

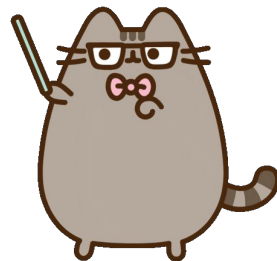
May
2021

Fall
2021

Present

What is an Internship and why should I care?

- Gives you a better idea of what you want to do when you graduate
- Exposure to the difference between industry, school, and academia
- Exposure to different skills, domains, and development ecosystems
- You can “test” a workplace before you commit to a multi year contract
- Start gaining “years of experience”
- Climb the “prestige” ladder quicker
- **Extended Interview



Agenda

- **Workplaces**
- **Reading Postings**
- **Finding Postings**
- **Networking**
- **Resumes**
- **Interviews**



Workplaces



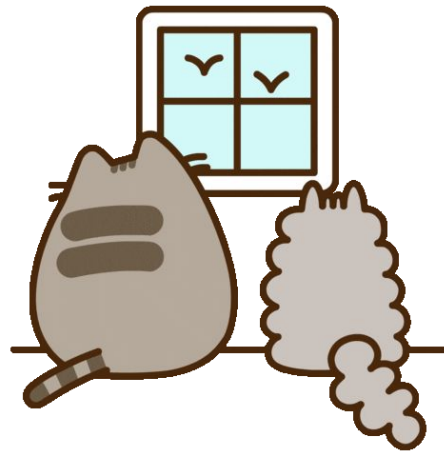
Core Factors of judging an Organization

- **Organization Level**

- **Size**
- **Values**
- **Mission / Market**

- **Team Level**

- **The Project**
- **Structure**
- **The People**

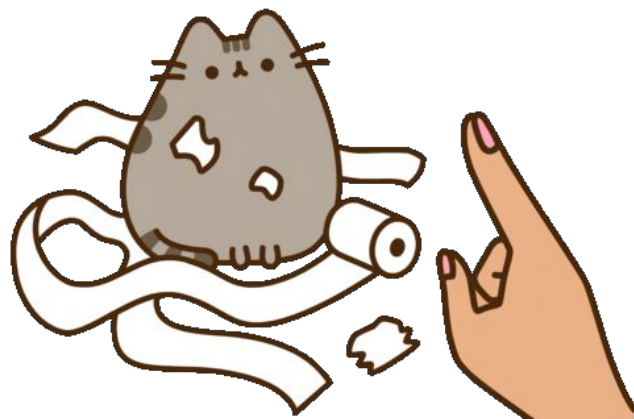


What you can see from the outside...

What won't know till your first day...

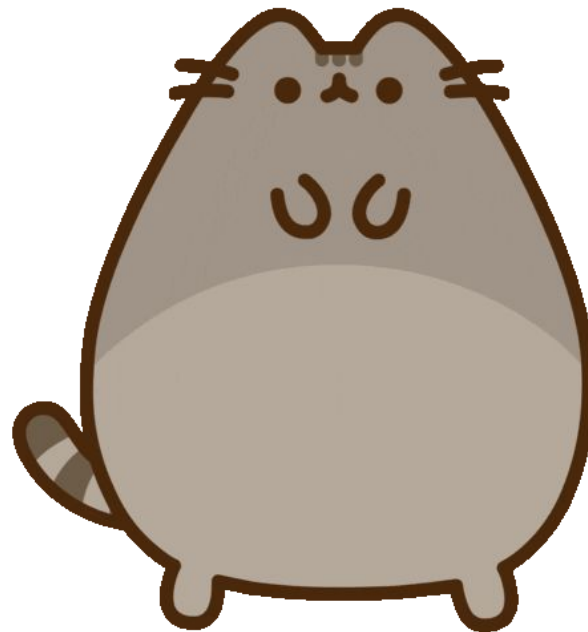
The “Dream Company” Fallacy

Despite some companies seeming like great places to work, it's ultimately the people you work with that will have the most impact on your experience.



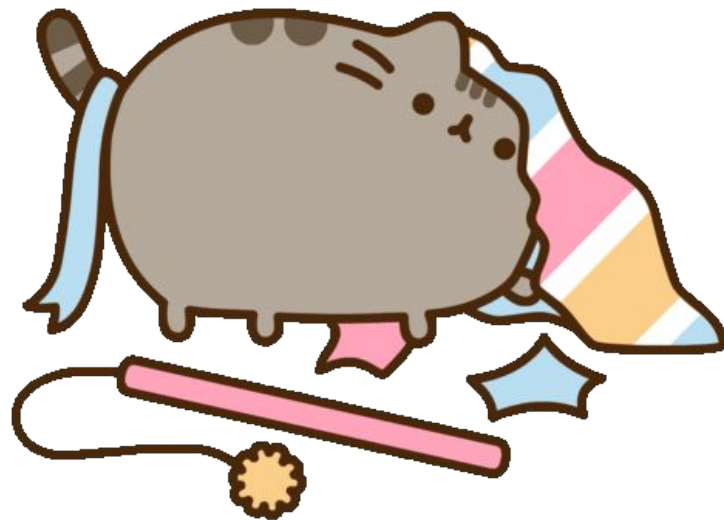
Organization Size

- **How “specific a job is”**
 - Bigger → want more niche people
 - Smaller → want people with more breadth
- **Bureaucracy & Flexibility**
 - Bigger → more bureaucracy
 - Smaller → less bureaucracy
- **More vs less job security**
 - Bigger → more security
 - Smaller → less security



Organization Type

- **Technical vs Non Technical Institution**
 - Technical = better developer experience
- **Government vs Private Companies**
 - Benefits + Job Security
 - Gov does not want to maintain “tools”
- **B2B vs B2C**
 - Depends on the market
- **Product Focus?**



Your Team

- **The Project / Work**
 - Contract work vs long spanning projects
- **Team Structure**
 - Client vs Backend Teams
 - Problem based teams
 - Domain based teams
 - How involved are UX, business, client, etc.
- **Team Dynamics**
 - Rituals & Ritual Frequency
 - Who writes up the issues?



In Reality, Every Job is Unique

Despite all these factors, these are only really generalizations and every organization varies in how much they do or don't align with these notions.



Reading Postings



Internship vs “Co-op”

“Must be in an accredited Canadian cooperative education program”.

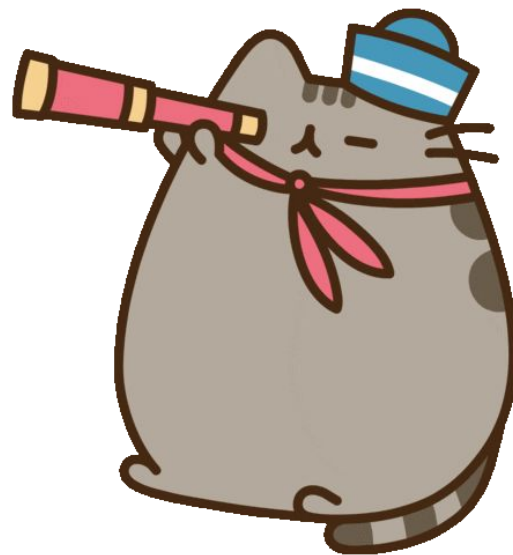
Usually indicates you need to be in a co-op program so that institution can receive a **tax break**.

Apply **anyways**, just know that it may not work out.



Key Posting “Components”

- **Duration** - Term Length, Full-time, etc
- **Position Title**
- **Skillset**
- **Location**
- **Salary*** - Transparency is a good sign



Term Lengths

4 months

Can be very short, you might not get to experience as much

You can often ask to extend

I've **personally** found my learning peaks around 4 months

8-16 months

More likely to be given ownership

if you dislike the work or environment you're stuck

Will appear more **significant** after you graduate



Job Titles



[See previous presentation](#)



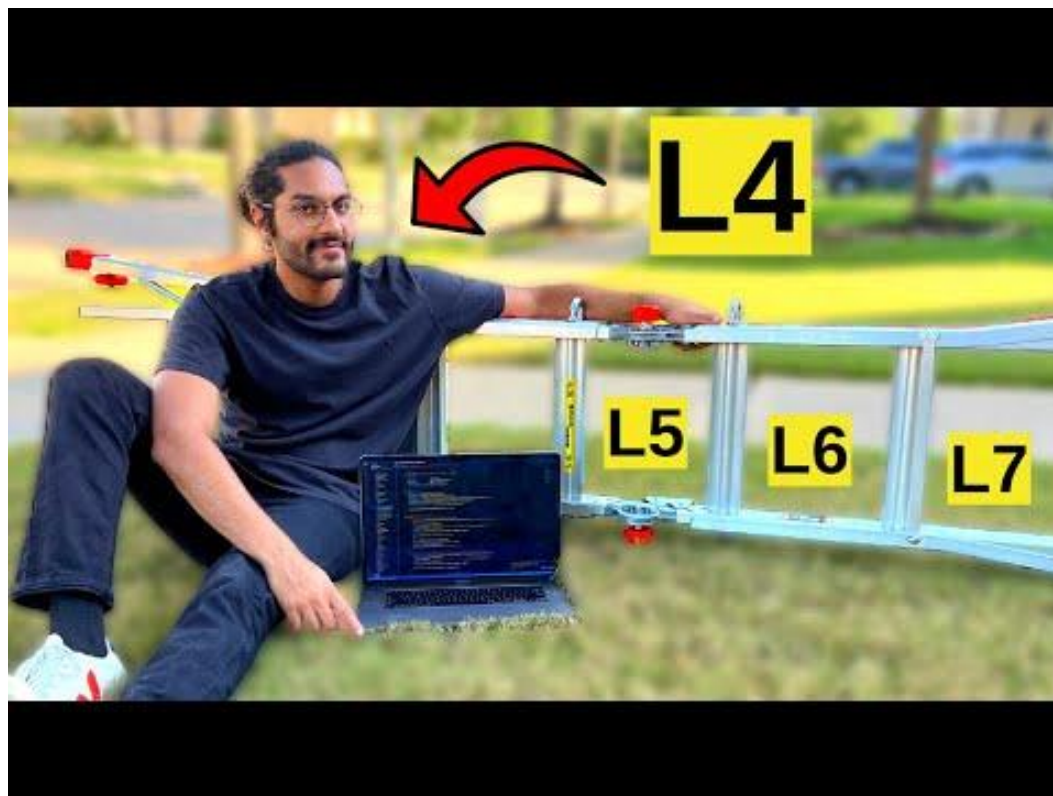
Job Titles - Seniority Explained

- **"Junior" Developer**
 - **AKA:** "Software Developer", "Software Developer I",
 - Entry-level position usually for new grads and those who are just starting out
 - Expected to need guidance and have feature level impact (they are basically "permanent interns")
 - 0-2 years of experience
- **"General" Developer**
 - **AKA:** "Software Developer", "Intermediate Developer", "Software Developer II",
 - Expected to have project level impact, sometimes awarded to high performing interns
 - 2-5 years of industry experience
- **"Senior" Developer**
 - The level most engineers are at and expected to be for their career
 - Expected to operate with little direction and have impact across teams and projects
 - 6-9 years of industry experience

*** will vary by organization



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Not Sure what Skills a company looks for?

Check their full-time postings.

You'll likely use the same tech as full-time employees.



Finding Postings



When To Search for Internships

Summer

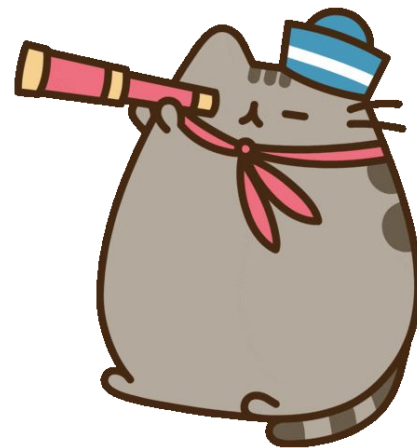
- Summer is the **most** competitive term (few people are in school)
- August - March

Fall

- The **least** competitive term (everyone's going back to school)
- May - July

Winter

- More competitive than Fall
- September - November



*** In reality you kind of never stop looking...

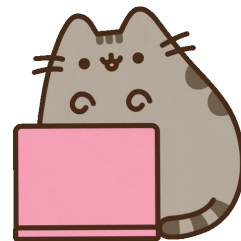
Where to Search – Surface Level Options



Co-operative
Education
CARLETON UNIVERSITY

Title Permutations + location

- Software Developer Intern
- Developer Intern
- Software Intern
- Software Developer co-op
- Developer co-op
- Software co-op



sted ▾ Experience level ▾ Company

☐ Internship

☐ Entry level

☐ Associate

☐ Mid-Senior level

☐ Director

☐ Executive

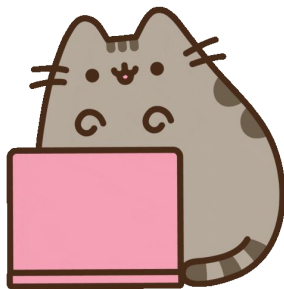
Cancel Show results

Filtering by job level is probably the best way to find “Junior / Entry level” Positions

Co-op Jobs Portal

To apply you include

- Resume
- Cover Letter
- **Grades Page**



Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106472	Junior Software Developer	2KEYS Corporation	Development
Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106524	Support Technician, Infrastructu...	Agriculture and Agri-Food Canada ...	IT Client Service
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106748	IT Service Desk Analyst	Agriculture and Agri-Food Canada ...	IT Client Service
Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106456	Software Developer (Co-op plac...	Ajile Light Industries	Research & Deve
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106806	Hardware Design Engineering St...	Arkalumen Inc.	Engineering
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106807	Software Design Engineering St...	Arkalumen Inc.	Engineering
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106659	Software Development Student, ...	Assent Compliance Inc.	Human Resource
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106098	Software Developer Co-Op	Barracuda Networks Canada Ltd.	Human Resource
Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106581	Trial Manager	Bell Canada	Network
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	107046	IPTV Applications Architect (12 ...	Bell Canada	Video Technology
Shortlist	Apply	NEW Deadline in 14 day(s)	2021 - Summer	106987	Bell 2021 Student Opportunities	Bell	Talent Acquisition
			2021 - Summer	106585	Full Stack Developer Student	BlackBerry	Human Resource

Dean's Summer Research Internships

- Work with professors to conduct research
- Requires a **CGPA of 10**
- Requires you to inquire with profs on your own
- [Link](#)



Federal student work experience program

- Adds you to a job bank for different departments within the Government of Canada
- Lets you list your field interests





angel.co/jobs Has lots of startup jobs



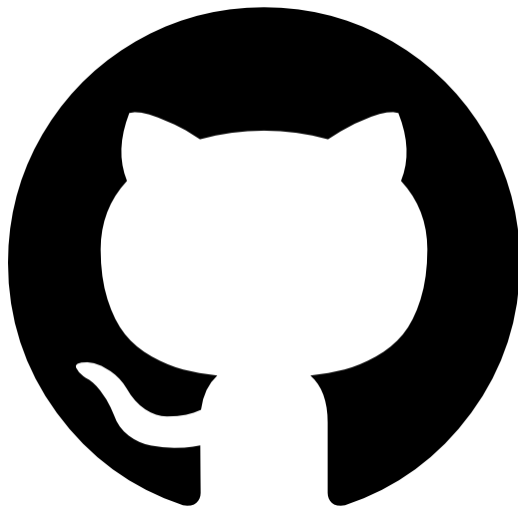
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<https://www.levels.fyi/internships/>



<https://www.cscareers.dev/>
<https://discord.com/invite/cscareers>



<https://github.com/pittcsc/Summer2023-Internships>

<https://github.com/jenndryden/Canadian-Tech-Internships-Summer-2023>

Finding Postings ++

- Find companies in your area - Kanata North, Downtown Ottawa
 - Google: "{x company} internship"
- Look at the list of companies that came to past Carleton Career Fairs

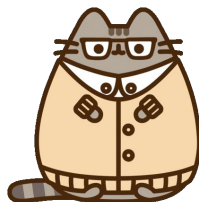


Networking



Career Events

- Conferences
- Career Fairs
- Meetups
- Hackathons (sponsors)
- Networking Events
- **Carleton MySuccess Calendar**

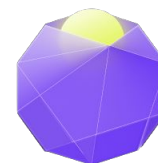


Thursday, September 22, 2022

The Virtual Fall Career Fair Will Host 65+ Employers: Here's What You Need to Know

All Carleton students and new graduates are invited to attend the Virtual Fall Career Fair on Wednesday, October 19, 2022, from 10:00 a.m. to 4:00 p.m. The Career Fair will give you the opportunity to:

- Chat with recruiters and professionals one-on-one. Meetings will take place as speed-networking-style conversations (about 10 minutes). This is done primarily through text chat, though some employers may use audio or video calls.



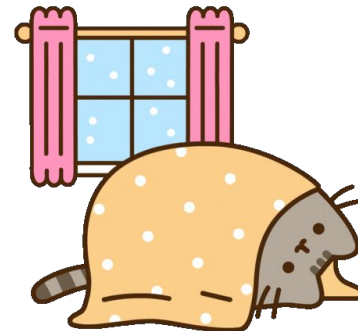
How to prepare for career fairs

For each company, figure out what they do and what skills they look for

- Example

You can find desired skills by looking at the full-time job postings in their careers section





Helpful Career Fair Advice

- You are going to the event to **“impress”** not to “learn”.
 - You should already know the kinds of positions they’re hiring for
 - You’re going to shake the recruiters hand
- **Do not** ask the company **“what they do”**... you should already know
- **Do not** say “I’m **first year** standing”
 - Understand you are competing with upper-year students
- Take **interest** in working at their company
 - Show you actually care by saying something like “I’ve heard {x} is the leader in {y}”

Learn to Sell Yourself

Sell yourself one way to the recruiter and another way to the developer.
The recruiter is looking to tick off boxes – say you know those skills.

“Hi my name is {name} and I have a background in {x,y,z}. I’ve heard great things about {something that shows you care} at {company}, and was interested in applying and learning about your upcoming student positions”.



Make a LinkedIn

- Go spam add a few hundred people - no one cares if it's cringe, just get it over with.
- You don't need to post anything, but having one is important because recruiters will search your name on LinkedIn after looking at your resume.



Using LinkedIn

- Inquire about Internship opportunities with “**Recruiters**” or “**Talent Acquisition**”



Matthew MacRae-Bovell • 11:19 PM

Hi My name is Matthew and I'm a computer science student who would love to intern with I'm currently searching for a Software Developer co-op for the upcoming summer and fall terms. I'm experienced with Ruby on Rails, React and Java. I would love to chat if you're free!

- You can also reach out once a posting is live to inquire about specific posting details.
- User activity raises you in recruiter search results





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rocketreach.co

The Matthew M-B Strategy.

- Reach out to “Hr / recruiter” for company that has been to Carleton career fairs before a **month or two** before the anticipated career event.
- Show up to the career fair – say you chatted with them on LinkedIn.
- Show them your very fancy carton resume that you got done at the Carleton print shop.
- Congratulations, now they will be forced to remember you.



Applying



Objective Resume Advice

- SAR = Situation. Action. Result.
- Make sure your resume scans - [there are tools to test this](#)
 - Two Columns Might not parse as well as single column
- Make sure it prints - check your page margins
- Grammar Check - Just do it...



Matthew's Resume Advice



- **Just look at what everyone else is doing.**
 - Find the resume of a student who got into a company you want to work for, you can infer factors helped them land the job
 - /r/csMajors
 - You can find a few hundred or so resumes to scan on the weekly resume roast threads
- **Don't take advice from just one person**
 - Taking raw resume advice (especially from other students) is hard to filter because what works for some people is not guaranteed to work for you. It might even hurt you.

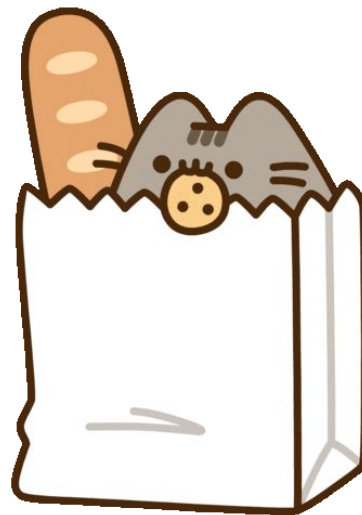


Matthew's Resume Advice++

- You can't please everyone: keep it general for general applying, tailor if you care more
- Resume needs to be "tailored" for both the non-technical recruiter and the developer
- Good formatting, spacing, etc. - shows you pay attention to detail
- There is no perfect template, you need to find or create a template that fits your background
- Don't oversaturate your skills - probably doesn't apply if you're 1st or 2nd year
- Maximize space ~ Broken lines look gross and waste space ... reword your points until they fit

Intern vs New Grad Applications

- When applying to **internships**, you want to focus application to focus on what relevant “**buzzword**” style skills you have and your eagerness to learn.
- When applying to **new grad** jobs you want to draw attention to more “senior” position responsibilities like code reviews, participating in an on-call rotation, etc.



What do I put on my resume if I don't have anything?

- **Projects** - great way to show experience with technologies without having paid experience
 - Don't have any projects? - Word your school work into projects
 - Yes, this is dangerous because recruiters are going to see the same projects over and over from Carleton students
- Add Extra-curriculars
- Add Interests
- Have really pretty spacing. Make it minimalistic.





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overleaf.com



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Matthew MacRae-Bovell

Impact-Driven Software Developer (He/Him)

matthewmacraebovell@outlook.com
github.com/MathyouMB
matthewmacraebovell.com

EXPERIENCE

Shopify

Software Developer Intern

Sept 2021 - Present

Ruby on Rails Kafka Golang Datalog Terraform

- Flow Team - Contributing to Flow, a tool automating millions of tasks within Shopify stores
- Worked with a team of four to create a new declarative domain model for automation steps, vastly reducing integration complexity and creating a consistent platform for 1st and 3rd party developers
- Increased resiliency in core event-driven services in preparation for significant Black Friday traffic
- Verified impact of changes on SLOs by utilizing load tests, metrics, and Datalog notebooks
- Authored technical specifications subject to review from co-workers and senior leadership
- Assisted teammates working in areas of my expertise through pair programming and code reviews
- Managed Kubernetes manifests and cloud service configurations with Terraform
- Participated in scheduled 'on-call' rotation responsible for identifying and triaging production bugs
- Utilized observability and monitoring tools such as Splunk and Bugsnag to identify system issues
- Experience with compilers and language design through developing new varieties of automation steps for Flow's 'drag-and-drop' visual automation building programming language

Royal Bank of Canada

Software Developer Intern

May 2021 - Aug 2021

Angular TypeScript Spring RxJS MongoDB

- Chose A Bank Team - Contributed to applications and tools focused on customer acquisition
- Contributed to designing the foundational architecture of several core application features
- Delivered features by coordinating with downstream microservice teams to expose necessary data
- Created responsive and resilient WCAG AA-compliant web components

TheScore

Software Developer Intern

Jan 2021 - Apr 2021

Elvix Ruby on Rails Phoenix Kubernetes CircleCI

- Sports Core Team - Contributed to the services behind TheScore's sports media application
- Worked with a team of six to develop and maintain Elvix based sports statistics ingestion service
- Utilized OTP and Actor model to develop fault-tolerant, concurrent ingestion processes
- Created endpoints in coordination with mobile teams to support new server-driven UIs

Fullscript

Software Developer Intern

Sept 2020 - Dec 2020

Ruby on Rails React TypeScript GraphQL Docker

- API and Integrations Team - Contributed to Fullscript's developer API and third-party integrations
- Worked with a team of eight to enable 3rd party developers to embed key Fullscript components as iframes, vastly reducing the complexity and time required to integrate with Fullscript
- Developed GraphQL operations for 3rd party developers to authenticate via OAuth with Fullscript

Kinaxis

Application Platform Developer Intern

May 2020 - Aug 2020

ASP.NET Java Maven Jenkins

- Platform Team - Contributed to the services behind Kinaxis' supply chain management platform
- Worked with ASP.NET to add features to a variety of SOAP based web services
- Improved build time of Java project by configuring Jenkins to build key modules as Maven artifacts

Bank of Canada

Student, IT Systems Developer

May 2019 - Apr 2020

JavaScript jQuery HTML/CSS Azure

Corporate Administration Portfolio - Built internal tools for administration departments

EDUCATION

Carleton University

Sept 2018 - Apr 2023 (expected)

Bachelors of Computer Science
Honours - Fourth Year

COMMUNITY

Carleton Computer Science Society

Sept 2018 - Present

President and five-time elected
executive, leading the organization of
services for 2500+ students.

CuHacking

Mar 2019 - Jan 2021

Contributed to the organization of
Carleton's annual hackathon attended
by over 600 students.

OPEN SOURCE

Sorbet

September 2021

Contributed fixes to the core Ruby
types provided by Sorbet.

GraphQL-Ruby

February 2021

Fixed outdated documentation
imparted by the release of Ruby 3.0.

DiscreteMath.ca

March 2020 - Present

Created a web platform for Carleton
University's discrete math courses used
by hundreds of students.

TECHNOLOGIES

Languages Backend

JavaScript Ruby Rust
Ruby on Rails Django Spring

Frontend Infrastructure

React Svelte Angular
Docker Kubernetes Terraform

- "On the job" skills vs "actual" skills
- Education and work experience at the top
- "Line" about team placement

*** Do note that I use this resume for presentation only. It is not optimized for parsers, but it's great for career events because it really stands out.



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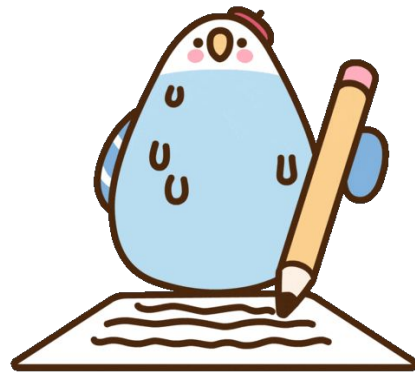
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My Opinion of Cover Letters



- Yes, not a lot of them get read
- Regardless, some people will weed you out
- Create a very minimal short cover letter that can easily be templated
 - Say the most with the fewest words
 - Include one sentence from the application in your cover letter



Cover Letter Structure

- Paragraph 1
 - Sentence 1: Who you are, your background
 - Sentence 2: How you found the company (if applicable)
 - Sentence 3: One Sentence from the application
 - Ex: "... and I want to join {company} to help **{build the future of x}**
- Paragraph 2
 - 3-5 Sentences about your best work - projects, experience, volunteer, etc.
- Paragraph 3
 - "This {summer?}, I would love to bring my passion for development to {company}. Feel free to contact me any time via email or phone to schedule an interview."



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OpenAI

Just use GPT Chat for your cover letters



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MA

Please write a cover letter for this position:

Software Engineer I/II
Redmond, Washington, United States Job available in 4 locations

Save

save Software Engineer I/II to job cart

Job number1469524 Date postedJan 5, 2023 TravelNone ProfessionSoftware Engineering
Role typeIndividual Contributor Employment typeFull-Time Work siteUp to 50% work from home

Microsoft is on a mission to empower every person and every organization on the planet to achieve more. Our culture is centered on embracing a growth mindset, a theme of inspiring excellence, and encouraging teams and leaders to bring their best each day. In doing so, we create life-changing innovations that impact billions of lives around the world. You can help us to achieve our mission. To learn more please visit:

<https://careers.microsoft.com/mission-culture>.

Responsibilities

We value people who can bring a diverse perspective to our product and where a developer will not just write code, but will have a real meaningful impact on the direction of the product and which features to build. We are building a team where diversity of thought and background is valued as strongly as technical skills, and where everyone is encouraged to come up with new ideas to make our customers' lives better.

We are looking for talented early to mid-career Software Engineers to help us deliver highly scalable services and world-class product experiences. You will have opportunities to work on multiple layers of the technology stack, ranging from customer-focused user experience work, building scalable distributed cloud services, working with big data, machine learning, and everything in between. You will learn how to design services and



Dear Hiring Manager,



I am writing to express my interest in the Software Engineer I/II position at Microsoft. With over 2 years of experience in programming languages such as Java, C/C++, C#, Python, JavaScript, and PowerShell, as well as a BSc in Computer Science, I am confident in my ability to contribute to the success of your team.

I am particularly excited about the opportunity to work on multiple layers of the technology stack and to have a meaningful impact on the direction of the product and its features. I believe that my skills in developing, debugging, and maintaining code in object-oriented languages and database querying languages, as well as my strong problem-solving skills, make me a strong candidate for this role.

Furthermore, I am experienced in running and working on services at scale, which aligns with the responsibilities listed in the job description. I look forward to the opportunity to collaborate with a diverse, fun-loving team and to have opportunities for mentorship and career growth.

I am excited about the opportunity to be considered for multiple like positions within your organization, and I am available for an invitation-only virtual Interview Day on Tuesday or Thursday of Month Date.

Thank you for your time and consideration, and I look forward to hearing from you soon.

Sincerely,

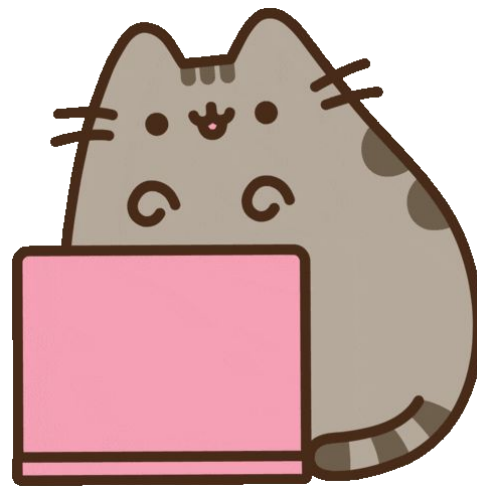
[Your Name]

Interviews



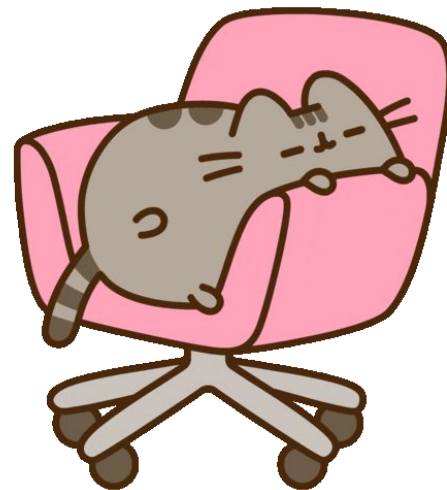
After Applying

- **OA - Online Assessment**
 - Take home project challenge
 - Time-based code challenge
- **Behavioral "HR" Interview**
 - Communications skills
 - Culture Fit
- **Technical Interview**
 - Algorithms
 - OOP Questions
 - System Design

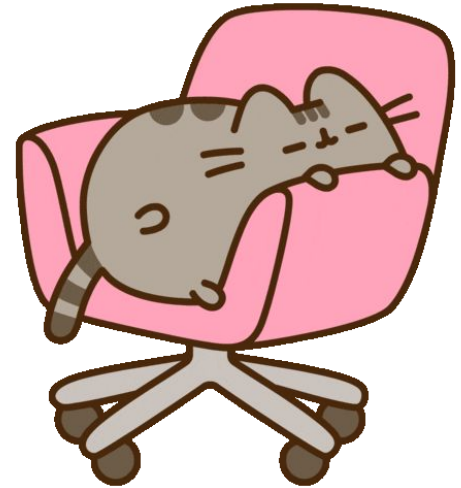


What is the Interviewer looking for? (Depends)

- If your someone they'd want to work with
- If you actually care about the work
- If you have a strong desire to learn
- How you communicate your ideas
- Some level of technical skill
- "Well rounded people"



Check Reddit and Glassdoor
for previous interview
experiences.





Obligatory LeetCode Slide

- You can't just do "8 hours of LeetCode"
- When I used to care about LeetCode, I did 1 problem a day and would attempt the problem again 1 week later to make sure I still understood it. Sort by difficulty, acceptance.
- I find LeetCode isn't that crucial for jobs at the local level



Before you Accept

- Don't feel pressured to accept a job offer immediately over the phone, take some time to think it over
- Know what you're going to be doing (at a surface level)



Thank You!

Questions?

